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REMARKS

Claims 1-22 were pending at the time of examination. Claims 1-22 were rejected. Claims 1, 9, 19 and 22 have been amended. No new matter has been added. Applicants respectfully request reconsideration of the rejections set forth in the Office Action dated November 13, 2006 in view of the preceding amendments and the following remarks.

In the Claims

Independent claims 1, 9, 19 and 22 have been amended to recite the aspects of the invention that were, and are, intended to be claimed by the pending claims. Independent claim 1 now recites:

a multiplexer designed or configured to determine if bandwidth is available on the channel after the multiple transcoded bitstreams have been scheduled by the multiplexer, and if so, allocate additional packets from the multiple transcoded bitstreams to use the available bandwidth on the channel after the multiple transcoded bitstreams have been scheduled by the multiplexer, and if not, to not allocate additional packets from the multiple transcoded bitstreams in the bandwidth that is available after the multiple transcoded bitstreams have been scheduled by the multiplexer.

Support for these amendments can be found throughout the Specification, and in particular, on page 6 line 6 to page 17 line 32, for example.

Rejections Under 35 U.S.C. §102

Claims 1-22 stand rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,594,271 issued to Wu et al. (hereinafter 'Wu'), which describes "a method and apparatus for providing an opportunistic data capability for an existing statistical multiplexing encoder (See Abstract)."

Independent claim 1 now recites a multiplexer designed or configured to "determine if bandwidth is available on the channel after the multiple transcoded bitstreams have been scheduled by the multiplexer, and if so, allocate additional packets from the multiple transcoded bitstreams to use the available bandwidth on the channel after the multiple transcoded bitstreams have been scheduled by the multiplexer, and if not, to not allocate

additional packets from the multiple transcoded bitstreams in the available bandwidth after the multiple transcoded bitstreams have been scheduled by the multiplexer.”

Thus, the claims recite allocating additional packets from the multiple transcoded bitstreams into bandwidth that is available after transcoding and a first scheduling has been performed. If there is no available bandwidth after the first scheduling, then no packets are additionally scheduled. The art of record is silent on this combination of limitations.

First, the Office Action mailed November 13, 2006, uses col. 1 lines 20-28 and Figure 1 to describe multiple transcoded bitstreams as recited in the claims. The Applicants respectfully disagree with this reading of the reference. Elements 115, 120 and 125 of Figure 1 of Wu refer to channel encoders. In contrast, the bit rate converter recited in claim 1 of the present application provides multiple transcoded bitstreams. As is well known in the art, the process of transcoding entails 1) the decoding of an already encoded bitstream and 2) the re-encoding of the now decoded bitstream. Thus, Wu provides only multiple encoded bitstreams, and not, as recited in claim 1, multiple transcoded bitstreams.

Second, page 3 of the present Office Action cites column 5 lines 52-56 of Wu to teach “allocating additional packets from the multiple transcoded bitstreams to use the available bandwidth if spare bandwidth is available.” However, it is respectfully submitted that Wu does not allocate additional packets from the multiple transcoded bitstreams after the multiple transcoded bitstreams have been scheduled. In contrast, according to Wu, if additional bandwidth is available after a first scheduling then additional packets may be scheduled through Opportunistic Data Processor (ODP) 160 only.

Only in the next period (BR/QL cycle of Wu) can Wu readjust the bitrates for the multiple channel encoders (TSPs) and thus adjust bandwidth used by his channels. More particularly, the ODP 160 of Wu monitors a global quantization level (QL) value that is output by the Quantizer Level Processor (QLP) 130. The QLP 130 receives statistical information from the TSPs during a bitrate (BR) part of the BR/QL cycle and outputs the global QL according to the available bandwidth during a QL part of the BR/QL cycle (col. 5 lines 1-52 and col. 6 lines 27-43). It should be noted that the any bandwidth used by the ODP 160 is not factored into the bandwidth calculation performed by the QLP 130 for subsequent BR or QL control. The global QL is then used by the channel encoders to adjust the quantization step size used by the encoders for the next cycle. As already stated, the ODP 160 also monitors the global QL output by the

QLP 130. If the ODP 160 detects that additional bandwidth is available at a specific time during a BR/QL cycle, then the ODP 160 encodes opportunistic data from a file server 150 and forwards it to the packet multiplexer 140 for inclusion into the multiplexed transport stream. It should be appreciated that, within any given period/cycle, the ODP system 180 of Wu only allows for additional packets to be scheduled through the ODP 160 from the file server 150, and not from the TSPs. In contrast, according to claim 1 of the present application, if bandwidth is available on the channel after the multiple transcoded bitstreams have been scheduled by the multiplexer, additional packets are allocated from the multiple transcoded bitstreams within the same period.

Wu has no intention to modify the coding parameters of the encoders (TSPs). Furthermore, Wu declares in col. 5 lines 25-28 that "The goal of the opportunistic rate control algorithm is to minimize the impact on the quality of the regular video services, **while using any excess available bandwidth for the opportunistic data.**"

For at least these reasons, Applicants respectfully submit that Wu does not teach nor even suggest the combination of limitations of independent claim 1, and that the outstanding rejection of claim 1 should be withdrawn.

Independent claims 9, 19 and 22 recite similar limitations as claim 1, and hence, it is respectfully submitted that the rejections of these independent claims be withdrawn for at least the reasons set forth above with regard to independent claim 1.

Dependent claims 2-8, 10-18 and 20-21 each depend either directly or indirectly from independent claims 1, 9, and 19, respectively, and are patentable over the cited art of record for at least the reasons set forth above with respect to the independent claims. In addition, the dependent claims recite additional elements which when taken in the context of the claimed invention further patentably distinguish the art of record.

Based on the foregoing, Applicants respectfully submit that all pending claims are allowable over the art of record. Withdrawal of all rejection under 35 U.S.C. § 102(e) is therefore respectfully requested.

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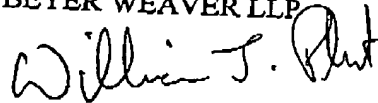
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CONCLUSION

Applicants believe that all pending claims are allowable and respectfully requests a Notice of Allowance for this application from the Examiner. Should the Examiner believe that a telephone conference would expedite the prosecution of this application, the undersigned can be reached at the telephone number set out below.

Respectfully submitted,

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